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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/312,073	05/13/1999	MINORU USUI	448563/163	2072

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EXAMINER
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NGHIEM, MICHAEL P

ART UNIT	PAPER NUMBER
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2863

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/26/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

09/312,073

Applicant(s)

USUI ET AL.

Examiner

Michael P. Nghiem

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-15, 17-23, 36-39, 42-48, 52, 54, 57, 58, 60-65, 68-73, 83-87, 92, 93, 95, 96 and 114-133 is/are allowed.
- 6) ☒ Claim(s) 97, 98, 101, 103, 106, 107 and 111-113 is/are rejected.
- 7) ☒ Claim(s) 99, 100 and 108-110 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10-25-06, 10-17-06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

Continuation of Disposition of Claims: Claims pending in the application are 11-15,17-23,36-39,42-58,60-65,68-73,83-90,92,93,95-101,103 and 106-133.

## **DETAILED ACTION**

The Amendment filed on December 19, 2006 has been acknowledged.

### ***Withdrawal of Allowability***

The indicated allowability of 97, 98, 101, 103, 106, 107, and 111-113 is withdrawn in view of Applicant's Remarks, filed on December 19, 2006, regarding "recess 60/145" (page 26, paragraph 2) and Shinada et al. (US 5,790,158). Rejections based on the newly cited reference(s) follow.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 97-101, 103, and 106-113 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 97, "the recess not communicating with the interior of the ink cartridge" (lines 13-14) is misdescriptive. The recess (partially covered by a film, see claim 101) appears to correspond to the recess of claims 52 and 57 (also partially covered by a film) and is

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described in the specification as recess 60 or 145 (see Applicant's Remarks, filed on December 19, 2006, page 26, paragraph 2). Page 12, lines 14-15, of the specification describes air communication between the ink chamber (137) and recess (145). Thus, the recess communicates with the interior of the ink cartridge.

The remaining claims are also rejected under 35 U.S.C. 112, second paragraph, for being dependent upon a rejected base claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 97, 98, 101, 103, 106, 107, and 111-113 are rejected under 35 U.S.C. 102(b) as being anticipated by Shinada et al. (US 5,790,158).

Regarding claim 97, Shinada et al. discloses an ink cartridge (Figs. 15's) for an ink jet printer (Fig. 1), comprising:

- an ink cartridge main body (501) having an ink chamber (504-506) communicating with an ink supply port (513, 513', 513");

- a lid (516) covering an opening portion of the ink cartridge main body (Fig. 15a), and having an atmosphere communication port (514, 514', 514'') through which the ink chamber is communicateable with atmospheric air (Fig. 15a),

- wherein a narrow groove (540, 540', 540''), sealed by a film (542) to define a capillary (Fig. 18a), is formed on a surface of the lid (Fig. 18a), one end of the narrow groove communicating with the atmosphere communication port (514, 514', 514'') (Fig. 18a), and the other end of the narrow groove communicating with an opening (openings of 541, 541', 541'') to be open to the atmospheric air (Figs. 18a), the narrow groove occupying only a portion of the surface of the lid (Figs. 18a, 18b), the outer surface of the lid having a portion where the narrow groove is not formed (portions of 516 where either 540, 540', 540'' is not formed),

- a recess (segments of 541, 541', 541'') for storing a negative pressure under vacuum (column 10, lines 23-27) is formed on the portion of the outer surface of the lid where the narrow groove is not formed (segments of 541, 541', 541'' where neither 540, 540', 540'' is formed).

Even though Shinada et al. does not disclose that the recess does not communicate with the interior of the ink cartridge, this limitation is deemed misdescriptive as discussed above.

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Regarding claim 98, Shinada et al. discloses a plurality of the recesses (segments of 541, 541', 541'') for storing the negative pressure under vacuum are formed so as to mutually communicate with each other (Figs 18a, 18b).

Regarding claim 101, Shinada et al. discloses that the film is sized so as not to cover fully the recess (Figs. 18a, 18b).

Regarding claim 103, Shinada et al. discloses a recess is formed in the edge of the lid (top surface of 516) and a portion of the film is received in the recess (film 542 covers recess, Figs. 18a, 18b).

Regarding claim 106, Shinada et al. discloses a rib is formed on a back surface of the lid (ribs on bottom surface of 516) opposite to the narrow groove (grooves 540, 540', 540'' are on top surface of 516).

Regarding claim 107, Shinada et al. discloses a rib for pressing a porous member is formed on a back surface of the lid, and the narrow groove is opposite to the rib (Fig. 26a).

Regarding claim 111, Shinada et al. discloses that the film includes a first film (542) and a second film (545), the first film is adhered to cover the narrow groove to form the

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capillary and the second film is removably adhered across the first film (545 is across from 542, Fig. 18b).

Regarding claim 112, Shinada et al. discloses that the opening and the recess are covered by a film removably adhered to the lid (Figs. 18a, 18b).

Regarding claim 113, Shinada et al. discloses that the ink cartridge is packed by a packing member of an air impermeable film under a vacuum condition (column 10, lines 23-27).

#### ***Allowable Subject Matter***

Claims 99, 100, and 108-110 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 11-15, 17-23, 36-39, 42-58, 60-65, 68-73, 83-90, 92, 93, 95, 96, 114-133 are allowed.

#### ***Reasons For Allowance***



The **combination** as claimed wherein the recess is partitioned by protruding portions into a plurality of recesses arranged in a grid shape (claim 99) or the narrow groove is defined by two protruding portions spaced from each other (claim 108) or the opening of each of the narrow grooves are enlarged toward an end portion thereof, and the plurality of the openings are arranged spreadingly in a fan shape (claim 110) is not disclosed, suggested, or made obvious by the prior art of record.

Please see previous Office Actions and Applicant's Remarks for reasons for allowance for the other claims.

### ***Response to Arguments***

Applicant's arguments filed on December 19, 2006 and September 11, 2006 have been fully considered but they are not persuasive.

With respect to the 35 USC 102 rejection of claim 97, Applicants argue that Shinada does not teach that the recess is formed on the portion of the outer surface of the lid where the narrow groove is not formed.

Examiner's position is that Shinada discloses a recess (segments of 541, 541', 541") is formed on the portion of the outer surface of the lid (516) where the narrow groove is

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not formed (segments of 541, 541', 541" are formed where neither 540, 540', 540" is formed).

Applicants further argue that Shinada does not teach the recess not communicating with the ink cartridge's interior.

Examiner's position is that the limitation of the recess not communicating with the interior of the ink cartridge is deemed misdescriptive as discussed above.


#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (571) 272-2277. The examiner can normally be reached on M-H.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**MICHAEL NGHIEM**  
**PRIMARY EXAMINER**

Michael Nghiem

March 19, 2007